

GRANULOMETRY

The technique of granulometry is used to measure the size of the elementary particles forming grain clusters of various substances such as flours, powders, sands, etc. and define the statistical frequencies of the various grain sizes in the assembly studied.

Although widely used in industry for flours, cements and abrasives, the most numerous and varied applications of granulometry are found in the field of Earth Sciences: it is used in particular in geology to determine the sedimentation conditions; in pedology, it provides a quantitative definition of a fundamental feature of soils: texture. In everyday language, the actual designation of most loose geological formations is based on their dimensions: for rounded rock fragments, in decreasing order of size, we speak of pebbles, gravels, sands, etc. These common expressions have generally been adopted in scientific terminology; many names are used to describe the granulometric fractions.

The analysis modes are also varied; they depend on the grain type, which may be more or less brittle, soluble or insoluble, flocculated or deflocculated, as well on their dimensions; sieving for example, frequently used for quartzose sands, is unsuitable for large blocks or very small particles. Lastly, the ways of expressing granulometries (indices, graphs) depend in particular on the degree of detail of the analyses conducted and the interpretation considered.